

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re KUTTAPPA)	Group Art Unit: 3711
)	
Serial No.: Cont. of 09/353,905)	Examiner: N/A
)	
Filed: 23 MAY 2001)	Atty Doc.: DSCK-1158-D1
)	
For: HEAVY FILLER IN GOLF BALL)	EXPRESS MAIL NO.
)	EL813322010US

Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

The present paper is submitted as a Preliminary Amendment in the above-noted Continuation Application of parent application 09/353,905. Should any fee be missing or insufficient, the Commissioner is hereby authorized to charge said fee to Lorusso & Loud Deposit Account No. 12-2147.

Please amend the above-noted application as follows:

IN THE CLAIMS

Please amend the claims as follows:

1. A golf ball comprising:

a one-piece core made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater;

and,

a heavy weight filler having a specific gravity equal to or greater than about 5.6, wherein said inorganic filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof; and,

a cover layer wherein at least one said cover layer is disposed upon said core.

2. The golf ball of claim 1 wherein said core produced with said heavy weight filler results in a lower PGA compression of said core relative to a core made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697.

3. A three-piece wound golf ball comprising:

a one-piece center made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater;

and,

a heavy weight filler having a specific gravity of at least about 5.6, wherein said heavy weight filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof;

a thread winding layer disposed upon said core wherein said thread layer comprises rubber; and,

a cover layer disposed upon said thread winding layer.

4. The golf ball of claim 3 wherein said center produced with said heavy weight filler results in a lower PGA compression of said center relative to a center made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697.

5. The golf ball of claim 1 wherein said core produced with said heavy weight filler results in a lower volume occupied by said heavy weight filler resulting in a lower PGA compression relative to a core made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific

gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697 and a volume of 1.95%.

6. The golf ball of claim 1 wherein by illustration said heavy weight filler selected is tungsten with a specific gravity of 19.3 is used in said core, said heavy weight filler has a volume of about 0.48% of said core, and by way of comparative illustration when a filler having a relatively low specific gravity filler used is zirconium dioxide having a specific gravity of 5.50 is used it has a volume of 1.95%, wherein use of said relatively low specific gravity filler results in increased use of amounts of said filler to meet desired weight range for said core and results in reduction of other compound components.

7. The golf ball of claim 3 wherein by illustration said heavy weight filler selected is tungsten with a specific gravity of 19.3 is used in said center, said heavy weight filler has a volume of about 0.48% of said center, and by way of comparative illustration when a filler having a relatively low specific gravity filler used is zirconium dioxide having a specific gravity of 5.50 is used it has a volume of 1.95%, wherein use of said relatively low specific gravity filler results in increased use of amounts of said filler to meet desired weight range for said center and results in reduction of other compound components.

8. The golf ball of claim 3 wherein said center produced with said heavy weight filler results in a lower volume occupied by said heavy weight filler resulting in a lower PGA compression relative to a center made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697 and a volume of 1.95%.

9. The golf ball of claim 1 wherein said inorganic filler is tungsten.

10. The golf ball of claim 3 wherein said inorganic filler is tungsten.

11. The golf ball of claim 3 wherein said one-piece core further comprises a vulcanizing agent.

12. A golf ball solid core comprising:

a compound wherein said compound comprises polybutadiene rubber having a cis content of 92% or greater; and,

an inorganic filler having a specific gravity equal to or greater than about 5.6, wherein said inorganic filler results in a lower PGA compression relative to a core made with a filler having a lower specific gravity of a conventional filler wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3, wherein said inorganic filler is selected

from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof, wherein said center is capable of being used within any known golf ball configuration.

13. The golf ball solid core of claim 12 wherein the inorganic filler selected is tungsten.

14. The golf ball solid core of claim 12 further comprising a vulcanizing ingredient added to said core.

15. The golf ball solid core of claim 12 further comprising the addition of a core regrind to said compound.

16. The golf ball solid core of claim 12 wherein by illustration said heavy weight filler selected is tungsten with a specific gravity of 19.3 is used in said core, said heavy weight filler has a volume of about 0.48% of said core, and by way of comparative illustration when a filler having a relatively low specific gravity filler used is zirconium dioxide having a specific gravity of 5.50 is used it has a volume of 1.95%, wherein use of said relatively low specific gravity filler results in increased use of amounts of said filler to meet desired weight range for said core and results in reduction of other compound components with increased PGA.

17. The golf ball solid core of claim 12 wherein said core produced with said heavy weight filler results in a lower volume occupied by said heavy weight filler resulting in a lower PGA compression relative to a core made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697 and a volume of 1.95%.

18. The golf ball of claim 2 wherein said core further comprises core regrind.

REMARKS

Claims 1-18 are currently pending.

II. Amendments

The applicant has amended claims 1-4 to more particularly point out what the applicant considers his invention. Additionally new claims 5-18 have been added, all are supported in the specification.

The applicant respectfully requests allowance of all claims.

MARKED UP CLAIMS

1. (Amended) A golf ball comprising:

a one-piece core made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater;

and ,

an inorganic filler having a specific gravity equal to or greater than about 5.6 wherein said inorganic filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof; and,

a cover layer wherein at least one said cover layer is disposed upon said core.

2. (Amended) The golf ball of claim 1 wherein[said inorganic filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, ferrous oxide and mixtures thereof] said core produced with said heavy weight filler results in a lower PGA compression of said core relative to a core made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697.

3. (Amended) A three-piece wound golf ball comprising:

a one-piece center made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater; and,

[an inorganic] a heavy weight filler having a specific gravity equal to or greater than about [5.4] 5.6, wherein said heavy weight filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof;

a thread winding layer disposed upon said core wherein said thread layer comprises [polybutadiene] rubber; and,

a cover layer disposed upon said thread winding layer.

4. (Amended) The [A] golf ball of [according to] claim 3 wherein said [inorganic filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide ferrous oxide, and mixtures thereof] center produced with said heavy weight filler results in a lower PGA compression of said center relative to a center made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697.

5. (New) The golf ball of claim 1 wherein said core produced with said heavy weight filler results in a lower volume occupied by said heavy weight filler resulting

in a lower PGA compression relative to a core made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697 and a volume of 1.95%.

6. (New) The golf ball of claim 1 wherein by illustration said heavy weight filler selected is tungsten with a specific gravity of 19.3 is used in said core, said heavy weight filler has a volume of about 0.48% of said core, and by way of comparative illustration when a filler having a relatively low specific gravity filler used is zirconium dioxide having a specific gravity of 5.50 is used it has a volume of 1.95%, wherein use of said relatively low specific gravity filler results in increased use of amounts of said filler to meet desired weight range for said core and results in reduction of other compound components.

7. (New) The golf ball of claim 3 wherein by illustration said heavy weight filler selected is tungsten with a specific gravity of 19.3 is used in said center, said heavy weight filler has a volume of about 0.48% of said center, and by way of comparative illustration when a filler having a relatively low specific gravity filler used is zirconium dioxide having a specific gravity of 5.50 is used it has a volume of 1.95%, wherein use of said relatively low specific gravity filler results in increased use of

amounts of said filler to meet desired weight range for said center and results in reduction of other compound components.

8. (New) The golf ball of claim 3 wherein said center produced with said heavy weight filler results in a lower volume occupied by said heavy weight filler resulting in a lower PGA compression relative to a center made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697 and a volume of 1.95%.

9. (New) The golf ball of claim 1 wherein said inorganic filler is tungsten.

10. (New) The golf ball of claim 3 wherein said inorganic filler is tungsten.

11. (New) The golf ball of claim 3 wherein said one-piece core further comprises a vulcanizing agent.

12. (New) A golf ball solid core comprising:

a compound wherein said compound comprises polybutadiene rubber having a cis content of 92% or greater; and,

an inorganic filler having a specific gravity equal to or greater than about 5.6, wherein said inorganic filler results in a lower PGA compression relative to a core made with a filler having a lower specific gravity of a conventional filler wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3, wherein said inorganic filler is selected from the group consisting of tungsten, bismuth, copper bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, zinc, bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof, wherein said center is capable of being used within any known golf ball configuration.

13. (New) The golf ball solid core of claim 12 wherein the inorganic filler selected is tungsten.

14. (New) The golf ball solid core of claim 12 further comprising a vulcanizing ingredient added to said core.

15. (New) The golf ball solid core of claim 12 further comprising the addition of a core regrind to said compound.

16. (New) The golf ball solid core of claim 12 wherein by illustration said heavy weight filler selected is tungsten with a specific gravity of 19.3 is used in said core, said heavy weight filler has a volume of about 0.48% of said core, and by way of

comparative illustration when a filler having a relatively low specific gravity filler used is zirconium dioxide having a specific gravity of 5.50 is used it has a volume of 1.95%, wherein use of said relatively low specific gravity filler results in increased use of amounts of said filler to meet desired weight range for said core and results in reduction of other compound components with increased PGA.

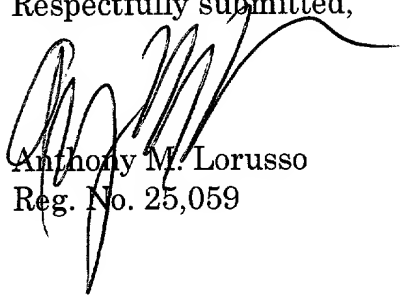
17. (New) The golf ball solid core of claim 12 wherein said core produced with said heavy weight filler results in a lower volume occupied by said heavy weight filler resulting in a lower PGA compression relative to a core made with a lower specific gravity filler while still maintaining a higher coefficient of restitution wherein said lower specific gravity filler is zirconium dioxide with a specific gravity of approximately 5.50 having a PGA of 89.3 and a coefficient of restitution of .697 and a volume of 1.95%.

18. (New) The golf ball of claim 2 wherein said core further comprises core regrind.

III. Conclusion

The applicant contends that all claims are supported by specification and the instant claimed invention is not taught by any known art. For the foregoing reasons, Applicants believe this application is in condition for allowance, which is respectfully requested.

Respectfully submitted,


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CERTIFICATE OF MAILING UNDER 37 CFR 1.10

I hereby certify that this Express Mail Transmittal Letter and any documents referred to as attached hereto are being deposited with the United States Postal Service on this date, 23 MAY 2001, in an "Express mail to Addressee" Express Mail Label No.EL813322010US addressed to Assistant Commissioner for Patents, Box Patent Application, Washington D.C. 20231.



Anthony M. Lorusso